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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/600,977 | 06/20/2003 | Ranjan K. Sen | 221208 | 7153 |

45373 7590 07/25/2006

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EXAMINER

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ART UNIT PAPER NUMBER

2194

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

1. This is the initial office action based on the application filed on June 20, 2003.

Claims 1-34 are currently pending and have been considered below.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

Claims 27-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to a signal directly or indirectly by claiming a medium and the specification recites evidence where the computer readable medium is defined as a "**wave**" (such as a carrier wave). Thus, the claims are directed to a form of energy that, at present, the office considers to be non-statutory subject matter.

Appropriate change is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section

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122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-34 are rejected under 35 U.S.C. 102 (e) as being anticipated by Shiomi et al. (20060095919).

Claim 1: Shiomi discloses a method for tracking kernel resource usage comprising the steps of:

- a. Generating a tag to charge a process allocated with kernel resources (fig. 15/33a paragraph 161,162,163; fig.15/34a, paragraph 154,157);
- b. Determining whether the process is a kernel process or a user process (fig. 15/33a,33b, paragraph 161, 162, 163); and
- c. Flagging the tag to indicate whether the process is a kernel process or a user process based upon the determination step (fig. 16, paragraph 134, fig. 19, paragraph 163).

Claim 2: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that step of generating a tag further comprises the steps of:

- a. Determining whether a request for kernel resources is passed

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from an intermediate function using a worker thread(fig. 15, paragraph 133);

- b. Finding at least one link between the worker thread and the process (fig. 16, paragraph 134); and
- c. Identifying the process that originated the request according to the found link between the worker thread and the process (fig.16, paragraph 134).

Claim 3: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that the step of flagging comprises the steps of:

- a. Generating a tag value to identify the kernel resources allocated to a kernel process (fig. 27, paragraph 186); and
- b. Saving a driver identification to the tag value (fig. 27, paragraph 186).

Claim 4: Shiomi discloses a method for tracking kernel resource usage as in claim 3 above and further discloses that the tag value with the driver identification is saved in a first word of the tag (fig. 27, paragraph 187).

Claim 5: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that step of flagging the tag further comprises the steps of:

- a. Generating a tag value to identify kernel resources allocated to a user process (fig. 27, paragraph 186, 187);
- b. Saving a type of kernel resources allocated to the tag (fig. 27,

paragraph 186); and

c. Saving a user process identifier to the tag to identify the process (fig. 27, paragraph 186).

Claim 6: Shiomi discloses a method for tracking kernel resource usage as in claim 5 above and further discloses that the tag value and the type of kernel resources are saved in a first word of the tag, and the user process identifier is saved in a second word of the tag (fig. 12, paragraph 117).

Claim 7: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that the step of flagging the tag further comprises the steps of:

a. Generating a tag value to identify kernel resources allocated to a user process (fig. 12, paragraph 117);

b. Saving the tag value to a first word of the tag (fig. 12, paragraph 117); and

c. Saving a user process identifier to identify the process to second word of the tag (fig. 12, paragraph 117).

Claim 8: Shiomi discloses a method for tracking kernel resource usage comprising the steps of:

a. Generating a tag to charge a process allocated with kernel resources (fig. 15/33a paragraph 161,162,163; fig. 15/34a, paragraph 154,157);

b. Determining whether the process is a first predefined process or a second predefined process (fig. 15/33a, 33b, paragraph 161, 162, 163); and

c. Saving an identifier to the tag to identify whether the process is a first predefined process or a second predefined process based upon the determination step (fig.16, paragraph 134; fig. 19, paragraph 163).

Claim 9: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the method comprises the steps of:

a. Saving a process identifier to identify the process allocated with the kernel resources (fig. 27, paragraph 186); and

b. Saving a type of kernel resources allocated to the process (fig. 27, paragraph 186).

Claim 10: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the step of generating a tag further comprises the steps of:

a. Determining whether a request for kernel resources is passed from an intermediate function using a worker thread (fig. 15, paragraph 133);

b. Finding at least one link between the worker thread and the process(fig.16, paragraph 134); and

c. Identifying the process that originated the request according to the found link between the worker thread and the process(fig.16, paragraph 134).

Claim 11: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the step of saving an identifier further comprises the step of flagging the tag as the first predefined process or

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the second predefined process according to the determination step (fig. 16, paragraph 134, fig. 19, paragraph 163).

Claim 12: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the first and second predefined processes relate to processes from kernel level or user level in an operating system (fig.15/44, paragraph 125)

Claim13: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the first and second predefined processes relate to processes used by users, a group of users, or accounts of the users in a network system; applications (fig. 15, paragraph 83).

Claim 14: Shiomi discloses a method for tracking kernel resource usage comprising the steps of:

a. Generating a tag to charge a process called from user level of an operation system allocated with kernel resources (fig. 15/33a, paragraph 161,162, 163);

b. Saving a tag value to the tag to identify the kernel resources allocated to the user process (fig. 16, paragraph 134; fig. 19, paragraph 163); and

c. Saving a user process identifier to the tag to identify the user process (fig. 27, paragraph 186).

Claim 15: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses that the tag value is saved in a first

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word of the tag, and the user process identifier is saved in a second word of the tag (fig.12, paragraph 117).

Claim 16: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses the step of flagging the tag as a process called from the user level of an operating system (fig. 16, paragraph 134; fig.19, paragraph 163).

Claim 17: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses that the step of saving a tag value comprises the steps of:

- a. Determining whether a request for kernel resources is passed from an intermediate function using a worker thread (fig.15, paragraph 133);
- b. Finding at least one link between the worker thread and the process (fig.16, paragraph 134); and
- c. Identifying the process that originated the request according to the found link between the worker thread and the process (fig.16, paragraph 134).

Claim 18: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses the step of saving a type of kernel resources allocated to the user process to the tag (fig.12 paragraph 117).

Claim 19: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses that the step of saving a user process identifier comprises the steps of:

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a. Extending the tag with a second word (fig.12, paragraph 117);

and

b. Saving the user process identifier to the second word of the tag (fig. 12 paragraph 117).

Claim 20: Shiomi discloses a method for tracking kernel resource usage as in claim 19 above and further discloses the step of saving the tag value to a first word of the tag (fig. 5, paragraph 96).

Claim 21: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags, the method comprising the steps of:

a. Identifying an amount of kernel resources allocated to a process indicated by a selected tag (fig. 29, paragraph 200);

b. Saving an association of the identified amount of kernel resources allocated with the process to a file (fig. 29, paragraph 200);

c. Identifying a type of the kernel resources allocated to the process indicated by the selected tag (fig. 29, paragraph 200); and

d. Saving an association of the identified type of the kernel resources allocated with the process to the file(fig. 29, paragraph 200).

Claim 22: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags as in claim 21 above and further discloses that the steps of:

a. Selecting a tag from the plurality of tags (fig. 18, paragraph

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143); and

b. Saving the selected tag to the file (fig. 18, paragraph 143).

Claim 23: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags as in claim 21 above and further discloses the steps of:

a. Determining whether there are any more tags from the plurality of tags (fig. 18, paragraph 143); and

b. Repeating the method for any other tags based upon the determination step (fig. 18, paragraph 143).

Claim 24: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags as in claim 21 above and further discloses the step of identifying the type of kernel resources comprises the steps of:

a. Determining whether the process is called from the user level (fig.15/33a, paragraph 161,162, 163); and

b. Performing the step of identifying the type of kernel resources when the process is called from the user level (fig. 15/33a, paragraph 161,162, 163).

Claim 25: Shiomi discloses a method for managing kernel resource usage comprising the steps of:

a. Reading a usage policy, wherein the usage policy includes data

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relating to threshold limits according to processes and kernel resource type (fig. 29/105, paragraph 208);

b. Searching a file to determine an amount of kernel resources used by each process (fig. 30, paragraph 209);

c. Determining whether the amount of kernel resource usage exceeds the threshold limits according to the user policy (fig. 30, paragraph 209); and

d. Taking an action according to the usage policy when the amount of kernel resource usage is over the threshold limits (fig. 30, paragraph 210, 211).

Claim 26: Shiomi discloses a method for managing kernel resource usage as in claim 25 above and further discloses the steps of:

a. Determining whether the process should be aborted according to the usage policy (fig. 30, paragraph 211);

b. Aborting the process according to the determination step (fig. 30 paragraph 211); and

c. Updating the file to reflect the aborted process (fig. 30, paragraph 211).

Claim 27: Shiomi discloses a computer-readable medium having stored thereon a data structure, comprising:

a. A first field containing a user process identifier to identify a user process allocated with kernel resources (fig. 27, paragraph 187) ; and

b. A second field containing a value to identify kernel resources allocated to the user process (fig. 27, paragraph 187).

Claim 28: Shiomi discloses a computer-readable medium having stored thereon a data structure as in claim 27 above and further discloses a third field containing a flag that indicates the user process as a process called from user level (fig. 25, paragraph 174).

Claim 29: Shiomi discloses a computer-readable medium having stored thereon a data structure as in claim 27 above and further discloses that the first field is a first long word of a tag, and the second field is a second long word of the tag (fig. 12, paragraph 117).

Claim 30: Shiomi discloses a computer-readable medium having computer-executable instructions for performing steps comprising:

- a. Generating a tag to charge a process allocated with kernel resources (fig. 15/34a, paragraph 154,157);
- b. Determining whether the process is a kernel process or a user process (fig. 15/33a,33b, paragraph 161, 162, 163); and
- c. Flagging the tag to indicate whether the process is a kernel process or a user process based upon the determination step (fig. 16, paragraph 134; fig.19, paragraph 163).

Claim 31: Shiomi discloses a computer-readable medium having computer-executable instructions for performing steps comprising:

- a. Generating a tag to charge a process allocated with kernel

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resources (fig.15/33a, paragraph 161, 162, 163; fig. 15/34a, paragraph 154, 157);

b. Determining whether the process is a first predefined process or a second predefined process (fig.15/33a,33b, paragraph 161, 162, 163); and

c. Saving an identifier to the tag to identify whether the process is a first predefined process or a second predefined process based upon the determination step (fig.16, paragraph 134; fig.19, paragraph 163).

Claim 32: Shiomi discloses a computer-readable medium having computer-executable instructions for performing steps comprising:

a. Generating a tag to charge a process called from user level of an operating system allocated with kernel resources (fig. 15/33a, paragraph 161, 162, 163);

b. Saving a tag value to the tag to identify the kernel resources allocated to the user process (fig. 15/33c, paragraph 161, 162, 163); and

c. Saving a user process identifier to the tag to identify the user process (fig. 16, paragraph 134).

Claim 33: Shiomi discloses a computer-readable medium having computer-executable instructions for performing steps comprising:

a. Identifying an amount of kernel resources allocated to a process indicated by a selected tag (fig. 32, paragraph 215);

b. Saving an association of the identified amount of kernel resources allocated with the process to a file (fig. 32, paragraph 215) ;

c. Identifying a type of the kernel resources allocated to the process (fig 32/105, paragraph 208); and

d. Saving an association of the identified type of the kernel resources allocated with the process to the file (fig. 32, paragraph 208).

Claim 34: Shiomi discloses a computer-readable medium having computer-executable instructions for performing steps comprising:

a. Reading a usage policy, wherein the usage policy includes data relating to threshold limits according to processes and kernel resource type (fig. 29/105, paragraph 208);

b. Searching a file to determine an amount of kernel resources used by each process (fig. 30, paragraph 209).

c. Determining whether the amount of kernel resource usage exceeds the threshold limits according to the user policy (fig. 30 paragraph 209); and

d. Taking an action according to the usage policy when the amount of kernel resource usage is over the threshold limits (fig. 30, paragraph 210, 211).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Footnote (7028298) discloses a method for managing resource usage of a particular resource by a set of related code.

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Draves (5802590) discloses a method for providing secure access to computer resources.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Abdou Seye whose telephone number is (571) 270-1062. The examiner can normally be reached Monday through Friday from 7:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James W. Myhre whose telephone number is (571) 272-6722. The fax phone number for Formal or Official faxes to Technology Center 3600 is (571) 273-8300. Draft or Informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 273-6722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-3600.

AKS
July 18, 2006


James W. Myhre
Supervisory Patent Examiner